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10/572,086	03/16/2006	Hoi-Sing Kwok	P46447	9309
2352 7590 01/07/2009 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403				
EXAMINER CONNELLY CUSHWA, MICHELLE R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed October 6, 2008 has been fully considered and entered.

Response to Arguments

Applicant's arguments filed October 6, 2008, with respect to claims 17-21, have been fully considered but they are not persuasive.

Applicant states that the previous Office action does not point out with particularity how the Jones reference in fact recites all the method steps of claim 17. The Examiner disagrees. The relevant part of the previous office action, indicating where all the limitations are taught in the Jones reference, is repeated below.

Applicant states that the previous Office action does not point out with particularity how the Bryan-Brown reference in fact recites all the method steps of claim 17. The Examiner disagrees. The relevant part of the previous office action, indicating where all the limitations are taught in the Bryan-Brown reference, is repeated below.

Applicant's arguments, see pages 9-14, filed October 6, 2008, with respect to claims 1, 2, 4-16, 22 and 23 have been fully considered and are persuasive. Accordingly, the rejections set forth in the previous Office action have been withdrawn in view of Applicant's Amendments to claims 1, 22 and 23.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 17, 18 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones (WO 03/102683 A1).

Regarding claim 17; Jones a bi-stable liquid crystal device (and corresponding method; see the abstract and Figure 26) comprising:

- a first substrate (250) having thereon a first conductive layer (256, 258) and a first alignment layer (264);
- a second substrate (252) having thereon a second conductive layer (260, 262) and a second alignment layer (266);
- a liquid crystal layer (254) sandwiched between the first and second alignment layers;
- the first alignment layer **inducing** a first pre-tilt angle θ_1 in the range of 20°-65° between the liquid crystal layer in contact with the first alignment layer (see page 48, lines 11-17);

- said second alignment layer **inducing** a second pre-tilt angle θ_2 in the range of 20°-65° between the liquid crystal layer in contact with the second alignment layer (see page 48, lines 11-17);
- said liquid crystal layer being capable of maintaining a stable bend state or a stable splay state at zero bias voltage (see the abstract) and being switchable between the stable bend state and the stable splay state when a **switching energy is applied** in operation to said liquid crystal layer (see the abstract and page 47, line 9, through page 49, line 2);
- further comprising input and output polarizers (268).

Regarding claims 18 and 21; the switching energy is an electrical pulse generated by the first (256, 258) and second (260, 262) conductive layers that provides an electrical field in a predetermined direction between the pair of substrates to switch the liquid crystal layer between the bend state and the splay state. Each of the first and second conductive layers are formed of two patterned electrodes (256, 258 and 260, 262, respectively) that are patterned into stripes that are substantially perpendicular in direction to each other to form an overlapping matrix of pixels (see Figure 26).

Claims 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bryan-Brown et al. (US 2005/0062919 A1).

Regarding claim 17; Bryan-Brown et al. discloses a bi-stable liquid crystal device (and corresponding method; see the title and paragraphs 53-59) comprising:

- a first substrate (3) having thereon a first conductive layer (strip like row electrodes, 6, form the conductive layer) and a first alignment layer (alignment grating; see paragraph 57);
- a second substrate (4) having thereon a second conductive layer (column electrodes, 7, form the conductive layer) and a second alignment layer (alignment grating; see paragraph 57);
- a liquid crystal layer (2) sandwiched between the first and second alignment layers;
- the first alignment layer **inducing** a first pre-tilt angle θ_1 in the range of 20° - 65° between the liquid crystal layer in contact with the first alignment layer (see paragraph 64);
- said second alignment layer **inducing** a second pre-tilt angle θ_2 in the range of 20° - 65° between the liquid crystal layer in contact with the second alignment layer (see paragraph 64);
- said liquid crystal layer being capable of maintaining a stable bend state or a stable splay state at zero bias voltage and being switchable between the stable bend state and the stable splay state when a **switching energy is applied** in operation to said liquid crystal layer (see paragraphs 66-67);
- further comprising input and output polarizers (13, 13'); and
- wherein the polarizers respectively angle the alignment direction by $\pm 40^\circ$ to $\pm 60^\circ$ (see paragraph 68).

Regarding claims 18-21; the switching energy is an electrical pulse generated by the first (6) and second (7) conductive layers that provide an electrical field in a predetermined direction between the pair of substrates to switch the liquid crystal layer between the bend state and the splay state (see paragraphs 66-74). Each of the first and second conductive layers are formed of two patterned electrodes (strip and column electrodes, 6 and 7) that are patterned into stripes that are substantially perpendicular in direction to each other to form an overlapping matrix of pixels. The liquid crystal material may be a two-frequency material, wherein a low frequency electrical pulse aligns the liquid crystal layer in a bend state and a high frequency electrical pulse aligns the liquid crystal layer in a splay state (see paragraph 74).

Allowable Subject Matter

Claims 1, 2, 4-16, 22 and 23 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Uyen-Chau Le can be reached on (571) 272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.

/Michelle R. Connelly-Cushwa/
Primary Patent Examiner
Art Unit 2874